Graphing Linear Equations in Slope-Intercept Form

*A quick review of slope-intercept form:*

Slope-Intercept Form is one way that we can write the equation of a line. Slope-Intercept Form refers to the equation y = mx + b.

In the equation y = mx + b,

m = slope (how we get from one point to another on a line)

b = y-intercept (where the line intersects with the y-axis)

x and y = the coordinates of any point on the line

*Graphing Lines:*

In order to graph a line, we need **2 points**.

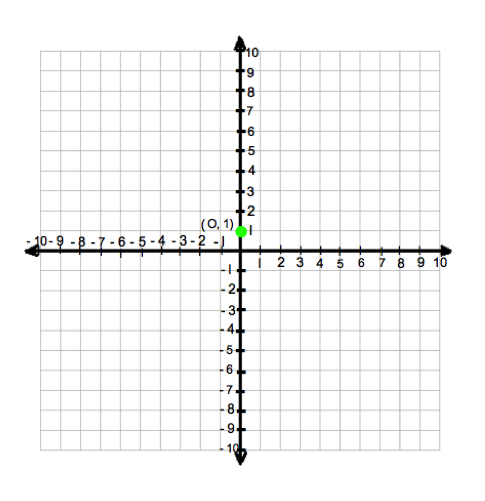
When we have an equation in slope-intercept form, we **automatically know 1 point – the y-intercept**. Then, since the slope tells us how we get from one point to another on a line, we can **use the slope to find the next point** on the line.

See the next page for an example.

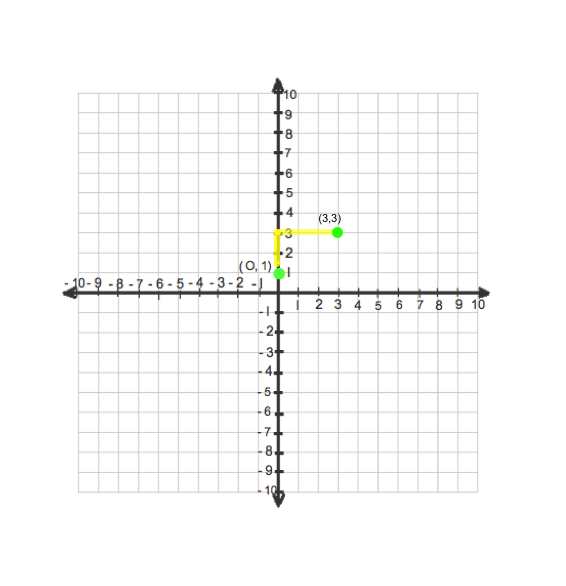
Example: Graph the equation 

In the equation, the y-intercept (b) = 1 and the slope (m) = .

The y-intercept tells us that one point on the line is at 1 on the y-axis and we can plot this point as shown below. The x-coordinate of any point on the y-axis is 0. Therefore, the coordinates of our y-intercept are (0,1).



Then we follow the slope up 2 and to the right 3 to get to our next point as shown below. We move up and to the right since the slope is positive.



Once we have these two points, we can connect them to create the line as shown below. Remember that this line continues on forever in both directions and does not just stop at the two points. Therefore, we must draw arrows at the end of each line.

